UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/828,832	WALLACE ET AL.
		Examiner	Art Unit	
		ALFONSO CASTRO	4142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 April 2004</u>.
2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-15</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-15</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>20 April 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date <u>20 April 2004</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1.   Claims 1-15 are pending.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on 4/20/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

3.   Claim 14 is rejected under 35 USC § 112 sixth paragraph. In Claim 14, applicant appears to be invoking 35 USC 112 sixth paragraph "means for triggering the events...". No particular structures are identified in the specification that would perform the function. Claim 14 is directed to "a set top box adapted to...". One of ordinary skill in the art would not be apprised of what structures are intended to be encompassed by the claim[s]. Nor would it be clear what the structures are intended to accomplish.

      In Claim 14, it is not clear whether all or part of the claim is functional or non-functional or non-functional language because claim 14 is specifically directed to "an index list stored...", and "means for triggering...".

      Appropriate correction is required in response to this office action.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Malaure et al. EP 1005885 B1 in view of Ching et al. Patent 7,222,354 B1.

7.   As to Claim 1, Malaure et al. teaches:

"a method for synchronizing" (all STBs participating in the application will be synchronized to initiate the application at the same time – page 5, 0042, line 24-27);

"stored content with broadcast content" (Page 2, [0006, 0012] -- downloaded interactive information application is associated with a TV broadcast program where the downloaded content is stored) ;

"storing event content in a **first receiver**" (Page 3, 0026, lines 19-21, 29-31 – supplying information to a user interface relating to interactive application and ability to store application information on the user interface). Examiner interprets "first receiver" to correspond to Melaure's television receiver; storing corresponds to Melaure's Fig. 1, Element 4.

"said event content associated with an event application and having an associated event time" (0012, line 28-33 –- application is scheduled to start at a certain time). Event application corresponds to Melaure's application data because it is associated with broadcasting program.

"receiving broadcast content at the first receiver concurrently with receiving the reference time" (Melaure, Page 3, Col. 4, line 24-37 – control signals and broadcast signals are transmitted simultaneously to users). Reference time corresponds to a control time used to synchronize the content to be received and played on all set-top boxes.

"associating within the first receiver the reference time with the event time" (Melaure, Page 5, Col. 7, line 12-18 – associating the reference time with the event time

corresponds to Malaure et al. teaching a real start time is transmitted and associated with the scheduled start time and causes the program to jump to a start routine. The scheduled start time corresponds to the event time indicated by applicant and the real time start corresponds to the reference time).

"triggering the event application on the first receiver responsive to a determined reference time" (Page 5, Col. 7, line 12-18 – Malaure et al. teaches a real start time is transmitted and associated with the scheduled start time and causes the program to jump to a start routine).

Malaure et al. does not teach "receiving from a source external to the first receiver a reference time". Although Malaure et al. does teach the real start signal will be transmitted to all STBs so that all STBs participating in the application will be synchronized to initiate the application at the same time (0042 line 24-27 -- real start signal corresponds to the reference time);

On the other hand, Ching et al. disclosed "receiving from a source external to the first receiver a reference time." (Col. 5, line 65-67 and Col. 6, line 1-5 -- synchronizing the time the content is to be displayed by using a GPS clock). Ching suggests Using a GPS to provide the synchronization code would correspond to using a source external to the first receiver a reference time. See also Fig. 3.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Ching et al., into a method of delivering interactive applications to a plurality of user interfaces of Malaure et al., because both are directed to delivery of multimedia and broadcast content to user

interfaces comprising set top boxes (see Ching et al. Figure 6B and Malaure et al. Page 2, Col. 1, line 3-33).   More specifically, Ching et al. is directed to transmitting broadcast content and multimedia programs to viewers' units to be stored on the viewers' set top box (Ching et al. Col. 4, line 10-17), while Malaure et al. is directed to transmitting interactive applications and broadcast content to multiple users comprising downloading applications to set top boxes (Page 2, Col. 2, line 13-37).

One of ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Ching et al., into a method for transmitting interactive information and broadcast content from a central source to a plurality of user interfaces comprising a set top box of Malaure et al., because that would have allowed users of Malaure et al. to synchronize the start the viewing or playing of the content and applications on all the set top boxes at the same time (Page 5, Col. 7, line 2-27), thus improving the synchronization of the real time start signal by using a GPS clock as suggested by Ching et al. (Col. 5 line 65 - Col. 6 line 6).

8.   As to Claim 2, Malaure et al. teaches:

"storing an index list" (Col. 5, 0035, lines 48-54 and Col. 6, 0037 – storing interactive applications where application information is broadcast as part of electronic program guide corresponds to index list). Malaure et al. additionally teaches EPG downloaded to the viewer's set top box in response to instructions by a viewer and stores program data stored on the STB (Col. 5, 0035, lines 48-54).

"a plurality of event times associated with a plurality of event applications" (Col 8 lines 30-32 scheduled start times of scheduled programs; page 4, Col. 6, lines 1-40 – programs associated with applications to be broadcast on interactive channels as disclosed in page, 4, 0035 lines 50-53).

Malaure et al. does not specifically teach teaches "index list responsive to the step of associating the reference time with the event time to enable sequential operation of the event applications on the first receiver in conjunction with broadcast content" although Melaure suggests "advancing stepwise through the index". Advancing stepwise through the index corresponds to user interface incrementing the application time value after the application begins where the incremental value is understood to track the sequential order of when the application events are to be executed as disclosed in Col. 7, 0044, Line 44, 51; Col. 8, line 44-52.

It is however, noted that Ching et al. teaches "index list responsive to the step of associating the reference time with the event time to enable sequential operation of the event applications on the first receiver" (Fig. 3, 302; Col. 5, line 55-62). Ching specifically suggests the multimedia segments to be played (Figure 3, 310) and the

order of the event is to be played (Fig. 3, 302) and the reference time (Col 6, lines 2-5), as noted index list, reference time, event time and sequential operation claimed by applicant corresponds to Ching's playlist, synchronized time, multimedia segments and order of segments to be played (Fig. 3, Col. 5, line 55-62, Col. 6, line 2-5).

"in conjunction with the broadcast content" (Ching: Col. 8, line 39-42) Ching's interactive application relates to broadcast television program corresponding to broadcast content.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melaure by using index list responsive to the step of associating the reference time with the event time to enable sequential operation of the event applications on the first receiver in conjunction with broadcast content" as taught by Ching in order to efficiently coordinate the display time for plural segments.

9.   As to Claim 3, Malaure et al. teaches:

"receiving event content for storage in the first receiver in a first data stream in advance of receiving broadcast content contained in a second data stream, where the first data stream is different from the second" (0038 lines 22-28) Melaure suggests executable applications are downloaded before the scheduled start time of program and broadcast content may be transmitted after the application is started).

10.   As to Claim 4, Malaure et al. discloses:

"receiving event content for storage in the first receiver in a first data stream concurrent with receiving broadcast content in a second data stream, where the first data stream is different from the second data stream" (0026, Col. 4, line 24-36 content is transmitted to user interfaces from two sources corresponding to two data streams which are combined in a combining unit with broadcast content corresponding to a second data stream as disclosed in).

11.   As to Claim 5, Malaure et al. suggests "the event times are listed as a value from zero reference point" (Col. 8, line 34-38 -- incrementing the application time value after the application begins);

"the step of changing the zero reference time point over a course of a broadcast to accommodate discontinuities in the broadcast content from an original broadcast content source" (0012, lines 1-3 -- the interactive application is associated with the broadcast program).

12.   As to Claim 6, Malaure et al. does not specifically teach "discontinuities result from commercials inserted within the original broadcast content".

It is noted, however that Malaure et al. does teach the interactive applications are associated with a broadcast program and the need to synchronize applications with live broadcast content (0012, lines 1-3; 0013 and 0042).

On the other hand, Ching et al. suggests "discontinuities result from commercials inserted within the original broadcast content" (Col 6, lines 2-5 -- the reference time to be used by the provider to synchronize broadcasting and programming provided to the users). Ching's disclosure of synchronizing programming with broadcast content suggests consideration of any discontinuities including commercials and other station interruptions and the need to assure that the interactive application was synchronized with the television broadcast as disclosed by Malaure et al. (0012, 0013, 0042).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Malaure by resolving discontinuities result from commercials inserted within the original broadcast content as taught by Ching in order to seamlessly synchronize events from different sources.

13. As to Claim 7, Malaure et al. does not teach "the reference time is received from an external source derived from a data stream independent from the broadcast content".

It is however, noted that Malaure et al. does teach "the reference time is received" (0042 line 24-27 --the real start signal will be transmitted to all STBs so that all STBs participating in the application will be synchronized to initiate the application at the same time) and "from a data stream independent from the broadcast content" (0024 -- the users may all receive the application data via a single common transmission medium or platform or alternatively, the data may be transmitted on multiple platforms).

On the other hand, Ching et al. disclosed "the reference time is received from an external source" (Col. 5-6, line 65-5 respectively -- synchronizing the time the content is to be displayed by using a GPS clock). Using a GPS to provide the synchronization code would correspond to using a source external to the first receiver a reference time.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Malaure by using an independent source for receiving a reference time due to transmission time and reception time differences of transmitters and receivers, as taught by Ching, in order to rely on a independent reference time and not the reference time provided by the broadcast stream or the receiver time.

14.   As to Claim 8, Malaure et al. does not specifically teach "the external source is a GPS satellite system".

On the other hand, Ching teaches "the external source is a GPS satellite system" (Col. 5, line 65-67 and Col. 6, line 1-5 -- synchronizing the time the content is to be displayed by using a GPS clock). Using a GPS to provide the synchronization code corresponds to using a GPS satellite system as an external source or providing a reference time.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Malaure by using a GPS as an independent source for receiving a reference time due to differences in time of the transmission and reception reference time of transmitters and receivers, as taught by Ching, in order to

rely on a independent reference time and not the reference time provided by the broadcast stream or the receiver time.

15.   As to Claim 9, Malaure et al. suggests "the external source is a coupled to the first receiver over a modem line" (Col. 4, 0027 -- signals may be transmitted to the user units on a separate FM-SCA channel or other data format such as a cable modem or internet).

16.   As to Claim 10, Malaure et al. teaches "wherein the reference time is derived from a data stream including the broadcast content" (Col. 4, lines 29-43 – application data and broadcast signals are combined and transmitted to user simultaneously).

17.   As to Claim 11, Malaure et al. does not specifically teach "storing reference frames at the first receiver; and comparing image frames of the broadcast content data with the reference frames to synchronize a local clock at the first receiver".

It is however, noted that Malaure et al. teaches the need to synchronize the real start time signal with the local counter in the set-top box (Col. 7, lines 24-27 and Col. 7, lines 31-33 --teaches the local counter in the user interface is initiated once the application is started).

On the other hand, Ching et al. suggests "storing reference frames at the first receiver; and comparing image frames of the broadcast content data with the reference frames to synchronize a local clock at the first receiver" (Fig. 3, 306; Col. 5, lines 38-50

the segment time to be rendered is disclosed in hours, minutes, seconds and **frames;** Col. 5, lines 48-50 –discussing multimedia playlist to be presented to user). Ching et al. additionally teaches that in order to synchronize the rendering of multimedia segments specified by the playlist and the actual delivery of actual delivery of multimedia, the *time* must be synchronized between the user devices and the provider (Col. 5-6, lines 65-5 respectively). Ching et al. suggests that in order to have a useful comparison, the information stored on the set-top box would have to be compared to similar information contained in the broadcast stream provider.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Malaure by using the frames of the multimedia as a reference time, as taught by Ching, in order to synchronize the time of the set-top box that renders the multimedia segments.

18.　　As to Claim 12, Melaure et al. does not specifically teach "receiving the broadcast content at a second receiver; and generating a reference time of receipt of the broadcast content at the second receiver and using the generated reference time to create a reference time for the first receiver".

It is however, noted that Melaure et al. teaches an interactive broadcast network (Col. 4, 0025, line 3-11) which can be used to allow participation by multiple users (Col. 7, 0042, lines 24-27). Melaure et al. also discloses the need to synchronize all the set-top boxes to initiate the application at the same time (Col. 7, 0042, lines 24-27). In a network setting it would only be necessary to transmit the real time start signal to one

set-top box in the network and not every individual set-top box. Melaure et al. teaches users at remote locations must compete together to be the first to respond multiple selection answers which may or may not be broadcast simultaneously (Col. 5, 0034). Therefore, the users would have to be synchronized to take part in the same or shared interactive application. Melaure suggests that in order for multiple users to compete in the same interactive application games being broadcast, then the individual interfaces/receivers would have to by synchronized with each other and with the broadcast being transmitted as taught by Melaure et al. (Col.5, 0034).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Malaure a first remote user to synchronize the other individual set-top boxes for the multiple users in a network setting that are participating in the same interactive application, as taught by Melaure, in order to synchronize the time of the set-top box that renders the multimedia segments.

19.   As to Claim 13, Melaure et al. teaches "the first receiver is a set top box" (Page 2, Col. 2, line 7-14 – application data relating to the associated application is also downloaded by the user interfaces and Page 3, Col. 4, line 44-47 – interface is a set top box).

20.   As to Claim 14, Melaure et al. teaches:

"a set top box adapted to receive broadcast content via broadcast signal and a reference time signal" (Page 4, Col. 4, lines 29-47 – set top box receives broadcast signals and Page 5 Col. 7, lines 24-27 -- real time start signal transmitted to set top box)

a set top box comprising "a memory within the set top box" (Page 3, Col. 4, lines 44-52 – set top box comprises ROM and RAM).

Melaure et al. does not specifically teach "an index list stored within the set top box memory and queried by the set top box responsive to the reference time signal".

It is noted, however that Ching et al. teaches "an index list stored within the set top box memory and queried by the set top box responsive to the reference time signal" (Col. 5, lines 3-5 -- play-lists can be downloaded to the set top box with storage capabilities and Col. 5, lines 48-50 (306) -- the time the program data is to be played and Col. 5, lines 65-67 and Col. 6, lines 1-5 teaches the set top box time and provider time are synchronized to match rendering of multimedia data with the real time the data and the actual delivery of multimedia data by the provider.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melaure by using index list responsive to the step of associating the reference time with the event time to enable sequential operation of the event applications on the set top box receiver in conjunction with broadcast content as taught by Ching in order to efficiently coordinate the display time for plural segments.

Melaure et al. does not specifically teach "said index list including event triggers indexed with the program content and stored with the set top box memory, and event times indexed to a reference time at which the events are set to trigger". Ching et al. teaches a play-list identifying the time the program data will be rendered (Col. 5, lines 48-50 & Figure 3, 306) when it matches the reference time with the provider (Col. 5, lines 65-67 and Col. 6, lines 1-5 -- an event time stored in memory to be matched with the reference time).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melaure by using index list responsive to the step of associating the reference time with the event time to enable sequential operation of the event applications on the first receiver in conjunction with broadcast content as taught by Ching in order to efficiently coordinate the display time for plural segments.

"Means for triggering the events responsive to the reference time" (Page 5, Col. 7, line 12-18 – Malaure et al. teaches a real start time is transmitted and associated with the scheduled start time and causes the program to jump to a start routine).

21.   As to Claim 15, Melaure et al teaches:

"a method for synchronizing" (all STBs participating in the application will be synchronized to initiate the application at the same time – 0042, line 24-27)

"displayable data with broadcast event in real time" (0018 and 0019 – application data enables the users to interact with the application where a mixture of live television program and/or data which provides input for the applications running on the user

interfaces; Page 2, Col. 2, lines 28-33 – interactive application is associated with a TV broadcast program or the like scheduled to begin at a certain time).

"activating data events at an appropriate reference time with the broadcast event" (0042 and 0043 – teaching synchronizing application data to coincide with the broadcast event).

Malaure et al. does not teach "receiving from a source external to the first receiver a reference time". It is however, noted that Malaure et al. does teach the real start signal will be transmitted to all STBs so that all STBs participating in the application will be synchronized to initiate the application at the same time (0042 line 24-27).

On the other hand, Ching et al. teaches "receiving from a source external to the first receiver a reference time" (Col. 5, lines 65-67, Col. 6, lines 1-5 -- synchronizing the time the content is to be displayed by using a GPS clock). Using a GPS to provide the synchronization code would correspond to using a source external to the first receiver a reference time.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Ching et al., into a method of delivering interactive applications to a plurality of user interfaces of Malaure et al., because both are directed to delivery of multimedia and broadcast content to user interfaces comprising set top boxes (see Ching et al. Figure 6B and Malaure et al. Page 2, Col. 1, line 3-33).   More specifically, Ching et al. is directed to transmitting broadcast content and multimedia programs to viewers' units to be stored on the viewers' set top box (Ching et al. Col. 4, line 10-17), while Malaure et al. is directed to transmitting

interactive applications and broadcast content to multiple users comprising downloading applications to set top boxes (Page 2, Col. 2, line 13-37).

One of ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Ching et al., into a method for transmitting interactive information and broadcast content from a central source to a plurality of user interfaces comprising a set top box of Malaure et al., because that would have allowed the system of Malaure et al. to synchronize the start the viewing or playing of the content and applications on all the set top boxes at the same time (Page 5, Col. 7, line 2-27), thus improving the synchronization of the real time start signal by using a GPS clock as suggested by Ching et al. (Col. 5 line 65 - Col. 6 line 6).

Thus it would have been obvious to one of ordinary skill in the art to synchronize the start the viewing or playing of the content and applications on all the set top boxes at the same time (Page 5, Col. 7, line 2-27), thus improving the synchronization of the real time start signal by using a GPS clock as suggested by Ching et al. (Col. 5 line 65 - Col. 6 line 6).

Conclusion

25.   The prior art made of record and relied upon in the above Office Action:

US Patent 7,222,354

EP 1005885 B1

The prior art made of record because the prior art discloses features similar to applicant's invention. The prior art was not relied upon but is considered pertinent to applicant's disclosure.

EP 1050328A1	PG Pub 2006/0253330
PG Pub 2007/0143784	Patent 6,029,045
PG Pub 2004/0073915	PG Pub 2008/0072251
PG Pub 2006/0125962	Patent 5,621,793
Patent 6,108,365	

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALFONSO CASTRO whose telephone number is (571)270-3950. The examiner can normally be reached on Monday thru Friday (8am to 5pm EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on 7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/19/2008
ac

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